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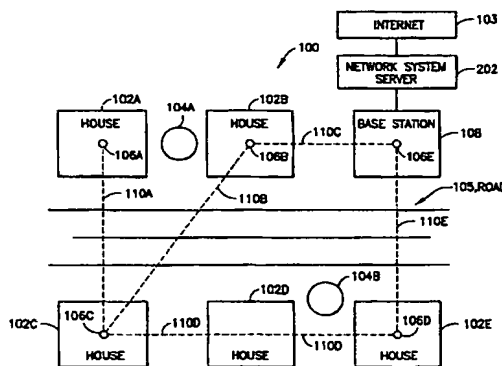
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(54) Title: WIRELESS INFRARED NETWORK TRANSCEIVER AND METHODS AND SYSTEMS FOR OPERATING SAME



(57) Abstract: A digital data network (100) uses network nodes (106) incorporating infrared transceivers (108). Each node (106) includes a plurality of infrared transceivers (108) having transmitter (109) and receiver (111) optics designed to facilitate line-of-sight infrared optical communications in a residential or business neighborhood. New nodes (106) are installed with at least one selected transceiver (108) having line-of-sight access to at least one existing transceiver (108). Automated tracking (370, 400, 500) and acquisition (300) processes are used to align transceivers (108) to enable data communication and to acquire newly installed nodes (108) into the network (100). Other automated tracking programs operate on an as-needed or scheduled basis to maintain good alignment and communications between adjoining node transceivers (108). Network nodes include weather-proof housings (112) and are of a size and shape to be easily mounted on existing structures so as not to disrupt the visual appeal of a neighborhood.